

Appl No. 10/507,265
Amdt. dated June 22, 2006
Reply to Office Action of March 22, 2006

Atty. Ref. 88527.0002
Customer No. 26021

Remarks/Arguments

Reconsideration of this application is requested.

Specification

The abstract is objected to under MPEP 608.01(b) for having multiple paragraphs. In response, the abstract is amended to be in one paragraph form.

Claim Status

Claims 1-25 are pending. Claims 1, 2, 11, 14, 15, 22 and 25 are amended.

Claim Rejections – 35 USC 112

Claims 1-4 are rejected under 35 USC 112, second paragraph, as indefinite. In particular, the Action objects to use of the term "if" and asserts that it renders the claims indefinite. In response, this term is deleted from all claims.

Claim Rejections – 35 USC 102

Claims 1-10 and 15-21 are rejected under 35 USC 102(e) as anticipated by Bernstein (US 6,509,547). In response, independent claims 1, 2 and 15 are amended to clearly distinguish over Bernstein.

Claims 1 and 2 are amended to specify that the wavelength of the laser beam has an index of absorption of the coating material that is higher than an index of absorption of the material of the bare optical fiber. See, for example, paragraph 0029 of applicant's specification. According to claims 1 and 2, as amended, only the coating material can be successfully removed due to the difference between the index of absorption of the laser beam in the optical fiber and the index of absorption in the coating material.

In Bernstein, by contrast, a laser beam 10 with low energy is applied to a rotating optical fiber 12 for gradual removal of the protective layer 20. Only a small fraction of protective layer 20 is removed at every pass, thereby avoiding damage to the underlying fiber. In another embodiment, Bernstein describes use of a quasi-Lambertian laser beam to minimize focusing effects of laser 10 through fiber 12, which may also damage the fiber. Bernstein also discusses use of multiple beams 10 that are incident on the fiber 12 from different directions. The laser power can

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be divided between the multiple beams, thereby reducing the damaging effects of focusing of each beam through the fiber.

The claimed method of the present invention, use of a laser beam having a higher index of absorption in the coating material than in the fiber material, is clearly different than the methods utilized by Bernstein. Since Bernstein does not disclose each and every element of claims 1, 2 and 15, it cannot anticipate those claims or claims 3-10 and 16-21 dependent thereon. The rejections under 35 USC 102(e) should be withdrawn.

Claim Rejections - 35 USC 103

Claims 11-14 and 22-25 are rejected under 35 USC 103(a) as obvious over Bernstein in view of Lawton (US 6,347,976).

Claims 11-14 and 22-25 depend, respectively, from claims 1, 2 and 15. Lawton does not remedy Bernstein's failure to disclose use of a laser with a higher index of absorption in the coating material than in the fiber. Therefore, claims 11-14 and 22-25 distinguish over Bernstein and Lawton for the same reasons set forth with respect to claims 1-10 and 15-21. In addition, as discussed below, further amendments are made to introduce additional distinguishing subject matter to some of the dependent claims.

Claims 11 and 22 are amended to specify that the removal is carried out in a hermetically sealing chamber. As depicted in Fig. 6 and described in applicant's paragraph 0052, when the coating material is removed by a laser beam, a toxic cyanogen gas is produced. Removal of the coating material in a prevents detrimental exposure to this gas. Since neither Lawton or Bernstein disclose removal of the coating material in a hermetically sealing chamber, claims 11 and 22 are allowable for this additional reason. Claims 12, 13, 23 and 24 depend from claims 11 and 12 and also enjoy this additional distinguishing feature.

Claims 14 and 25 are amended to specify that inert gas is introduced to a portion of the coated fiber to which the laser beam is applied. This is advantageous as it prevents the bared optical fiber from being deteriorated in strength by

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discharging the oxygen atmosphere from the vicinity in which the laser beam is applied (see applicant's paragraph 0033).

In Lawton, by contrast, inert gas is introduced into sensing ports 162c, 164c connected with detection system 160. As signal source 162 emits the signal and signal sensor 164 receives the signal, the signal intensity changes when the condensed moisture or contamination adheres in sensing ports 162c, 164c. Thus, Lawton prevents adhesion of condensed moisture or contamination by introduction of the inert gas to sensing ports 162c, 164c, which is clearly different from applicant's claimed introduction of inert gas.


For these reasons, in addition to those set forth for claims 1-10 and 15-21, claims 11-14 and 22-25 are not obvious over Bernstein in view of Lawton. The rejections under 35 USC 103(a) should be withdrawn.

Conclusion

This application is now believed to be in condition for allowance. The examiner is invited to telephone the undersigned to resolve any issues that remain after entry of this amendment. Any fees due with this response may be charged to our Deposit Account No. 50-1314.

Respectfully submitted,
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